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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,648

10/30/2003

Wassim Haddad

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EXAMINER

JAIN, RAJ K

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

05/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/696,648	HADDAD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Raj K. Jain	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/30/03</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: In line 5 the wording "with the or each mobile....." does not make sense. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "wireless technologies" in line 8, similarly, in Claim 12 in line 26. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosener et al (US 2002/0028655 A1) in view of Tourunen et al (US 2002/0001298 A1).

Regarding claims 1, 4, 10-12, Rosener discloses a wireless LAN comprising an access point 105 (Fig. 1), at least one communications device 101, and a controller 106, the access point including a data communicator 104 for communicating data with the or

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each mobile communications device 101 over downlink and uplink channels each of which uses a respective wireless technology,

said at least one mobile communications device 101 (Fig. 1, paras 45, 46) including a data communicator for communicating data over said channels (see para 40 and Table 1, the use of a data communicator within the mobile is inherent based on the capabilities of receiving and/or transmitting data by a mobile device as depicted by Table 1) and for using said wireless technologies (see para 69), wherein a first of the channels is arranged to use a wireless technology operating at a first frequency bandwidth, and a second of the channels is arranged to use a different wireless technology operating at a second, non-overlapping frequency bandwidth (see paras 42 84-88, duplex communications within a wireless network are accomplished via non-overlapping frequencies), and wherein the controller is arranged for controlling data communications over the downlink channel and the uplink channel to maximise the QoS of downlink data communication (see claims 38 and 42, the signal quality is constantly monitored against a predefined threshold value and adjusted accordingly to maintain a desired signal level between mobile and base transmitter).

Rosener fails to disclose wherein the wireless technology arranged to be used for the downlink channel is arranged to operate at a higher data rate than the wireless technology arranged to be used for the uplink channel.

Tourunen discloses wherein the wireless technology arranged to be used for the downlink channel is arranged to operate at a higher data rate than the wireless technology arranged to be used for the uplink channel (see paras 28-31, the data rates

are independently determined whereby the downlink rate is higher the uplink rate.). The use of variable data rates for downlink and uplink allows for optimum bandwidth allocation and usage. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Tourunen with Rosener so as to optimize the bandwidth usage amongst varying wireless devices as appropriate.

Further with respect to claim 11, Tourunen discloses a service request from the mobile device UE to base transceiver (see Fig. 1, para 28).

Regarding claim 2, Rosener discloses wherein each of the wireless technologies is one of 802.11a, 802.11b, Hiperlan/2, Bluetooth or Home RF (see 69.).

Regarding claims 3, 5-7, Tourunen discloses wherein said at least one mobile communications device UE (Fig.1) is arranged to transmit a service request signal on the uplink channel, and the controller is arranged to control the bandwidth on the downlink channel to a given mobile communications device in response to a service request signal received from that device (see para 28). Reasons for combining with Rosener same as for claim 1.

Regarding claims 8 and 9, Tourunen discloses controlling data communications so that any spare capacity on the uplink channel is used for downloading data from the access point to the given mobile communications device (see para 28, The radio resource management system RRM determines what kind of radio resource parameters would be optimal for using the application and defines according to the available radio resource capacity the most suitable parameters for the radio bearer. The radio

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resource management system RRM transmits instructions to the radio resource control protocol RRC which performs the actual radio resource allocation. For applications which require a one-way connection only, all the available capacity, for instance x kbit/s, is typically allocated for the one direction, typically the downlink direction, and no capacity, i.e. 0 kbit/s, is allocated for the other direction, i.e. the uplink direction.)

Reasons for combining with Rosener same as for claim 4.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

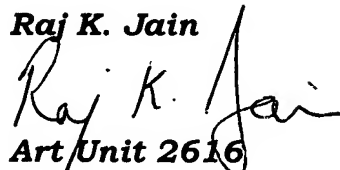
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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Raj K. Jain**

A handwritten signature in black ink, appearing to read "Raj K. Jain", written over the printed name and art unit number.

**Art Unit 2616**

April 24, 2007